



"...McCalmont... they were professional the whole time. They did a great job for us."

**-George G., Project Manager
Intermountain Electric, Inc.**

Greenfield Union School District

GUARANTEED POWER DELIVERY

Business Needs

The Greenfield Union School District was a power purchase agreement (PPA)-funded, district-wide renewable project consisting of 12 points of grid interconnection. The Bakersfield, California K-12 school district was driven to cut their expensive fixed utility costs by introducing solar to 10 of their school campuses, including the district offices. The Greenfield Union School District project had been previously awarded to another construction firm that had completed substandard preliminary designs. Since the project was under a PPA contract, the design-build team required a complete electrical redesign of the package that would guarantee performance optimization.

Solution

McCalmont Engineering took over the original design package and completed new designs that met the customer desired system performance requirements. There were also change orders associated with structural layout changes that required McCalmont Engineering to extend our scope of work yet still meet the construction timeline and contractual commissioning date.

Another concern for the district and the design-build team was building solar power systems that were safe for school campuses. McCalmont Engineering collaborated with the California Division of the State Architect (DSA) for the required project permit approval. We collaborated with the carport vendor and our subcontracted structural partner to design elevated solar structures that were safe and suitable as playground shade trellises and elevated parking canopies. Electrical trenching paths were minimized to reduce the impact on school foundations, including playgrounds and athletic fields, and we designed the elevated solar structures for full handicap accessibility.

Project Specifications

Location:	Bakersfield, CA
Size:	2.2 MW
Completed:	December 2012
Type:	Carports, Roof Mounts, Ground Mounts, Trellises
Scope:	Full engineering & design
Inverter:	SMA & Advanced Energy PV Powered
Modules:	AU Optronics
Racking:	Campbell Certified

Benefits

Despite the change orders and complex design adjustments, the district-wide project was completed on time with no delays. McCalmont Engineering met all change order requests on time through strong project management. The full district-wide project was permit approved, commissioned, and interconnected in four months.